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Using short films for the effective promotion of entrepreneurship

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Abstract

Mass media formats such as films may affect attitude and behavior at social, group or individual level. Existing literature lack sufficient evidence and results on the way according to which, films may influence in a positive manner entrepreneurial attitude. Research and results reported herein provide insight with respect to different executional factor formats that can be used in the design of effective short-films aimed toward fostering positive entrepreneurial attitude. Drawing on a sample of 221 engineering students and by means of Conjoint Analysis, we launched an experimental investigation aiming to understand perceived preferences for different combinations of short films' executional characteristics. Results suggest that the source of the message is perceived as the most important factor for the construction of effective short films followed by the length of the film. Research results reported herein represent a first step towards the better understanding of the design and construction of effective audiovisual means for the promotion of entrepreneurship and hence maximize the use of limited funding sources.

Keywords: Short film; Conjoint analysis; Communication; Entrepreneurship; Career starters

Introduction

Mass media, such as newspapers, TV, radio, films are recognized as major factors that influence a wide range of social attitudes and behaviors (Petty et al. 2009; Champoux, 1999; Dunphy et al. 2008). As such, they are supposed to play an important role in the case of influencing the entrepreneurial phenomenon (Eikhof et al. 2013; Radu and Redien-Collot, 2008).

In line with the social cognitive theory of mass communication (Bandura, 2001) which posits that humans may be inclined to adopt behavioral patterns through the observation of models, Eikhof et al. (2013) theorize that mass media have the potential to influence people's perceptions of the personal and professional choices available to them by presenting certain options as desirable and feasible and thus consider entrepreneurship as a viable career option. In the same vein, Hang and van Weezle (2007) propose that mass media create a discourse that transmits values and images ascribed to entrepreneurship and as such, they may play an important role in influencing the entrepreneurial phenomenon.

Nevertheless, the relationship between mass media and the promotion of entrepreneurship as a career choice is not yet well understood. Existing empirical research has failed to provide support for the proposition that mass media communication influence actual business startup (Hindle and Klyver, 2007). Stenholm et al. (2013), using data from the Global Entrepreneurship Monitor (GEM) found no support for the proposition that normative institutional arrangements (measured as the level of perceived media attention paid to entrepreneurship and the level of status of entrepreneurship) is positively associated with the rate and the type of entrepreneurial activity in a country.

These empirical results suggest that the transmitted communications may not be effective in changing recipients' attitudes towards entrepreneurship in the desired direction.

A main focus of existing studies on mass media and entrepreneurship has been the influence of cognitive representation of entrepreneurs on entrepreneurial intentions and behavior (Boyle, 2008; Radu and Redien-Collot, 2008). Most research has focused on the effects of mass media on people, after exposure (Eikhof et al. 2013). However, limited research has addressed how mass media can become more effective.

In the present research we address this gap and focus on the executional factors that can be used for the construction of effective mass media. Specifically, the purpose of the present research was to gain an understanding on the specific executional factors of short films students perceive as most important for positively changing their attitude towards entrepreneurship and hence, help consider entrepreneurship as a potential career choice. This is an important question in order to aid policy-makers' decisions in the allocation of public resources and educators in the use of interventions to facilitate entrepreneurial attitudes and intentions (Wongnaa and Seyram, 2014). Moreover, according to Klyver and Hindle (2007) initiatives trying to promote entrepreneurship need to consider the actual targets as different people decode and perceived the same messages differently.

The present article presents a concrete methodology and results from a survey conducted among 221 engineering students from a technical university. Methodologically the study coupled short-film design for the effective change of students' attitudes towards entrepreneurship with conjoint analysis. Research aims to identify what students perceive to be an effective short-film for the promotion of entrepreneurship, that is, short films able to change students' attitudes towards entrepreneurship.

The paper is organized as follows. First, we review the relevant literature on mass media communications and executional factors. Second, we provide a brief overview of conjoint analysis and then proceed to the presentation of research design and methodology. Third, empirical results are summarised with emphasis on the interpretation of the model. Finally, we discuss the research findings and conclude with limitations and areas for further research on the subject.

Background

Which are the executional factor formats that have an impact on a short film's effectiveness for the promotion of entrepreneurship? Although media-effect theories recognize that the effectiveness of media are conditional (i.e., the effects do not hold equally for different individuals) and that certain moderating variables increase or reduce the effects media have on individuals' perceptions and behavior (McGuire, 1989; Petty et al. 2009), the literature provides limited guidance in that respect; in other words, there are no hard

and fast rules as to what makes a short film effective? Obviously there is an element of subjectivity to any short film as different people will set their own criteria as to what they think makes an effective short film.

Business and management education literature argues that audio-visual media are more likely to influence students' mindsets compared, for instance, to lectures and discussions (Dunphy et al. 2008). Films can be used as a teaching resource since they are a familiar medium to students and consequently have the potential to raise interest about a subject or a course of action and offer both cognitive and affective experiences and as such they can be very helpful in shaping students' knowledge and attitudes (Champoux, 1999). However, very little effort has been put to try to understand the different ways in which students perceive and conceptualize the design features or executional factor formats that support the creation of effective films for business management education in general and entrepreneurship promotion in particular (Stewart and Furse, 1984; Wells, 2014). Stated differently, it is interesting that very little research has been conducted examining the concept of persuasion and audiovisual media design.

How can the design of mass media be used to foster positive attitudes towards entrepreneurship? In particular, how do short films' technical (i.e., the length of the film) and non-technical design features (i.e., emotionalized content) impact students' change of attitudes towards entrepreneurship?

An "attitude" is a latent concept that is primarily demonstrated in how people value an attitude object with some degree of favor or disfavor (Ajzen, 1991). According to the theory of planned behavior (TPB) (Ajzen, 1991) attitudes serve a key mediational role: attitude change mediates the impact of belief change on behavior change. A person is motivated to perform a particular behavior to the extent that s/he has a positive attitude toward that behavior. Moreover, the attitude construct is considered an important mediating variable between exposure to new information on the one hand and behavioral change, on the other (Petty et al. 2009).

Researchers concerned with the study of media influence have focused on the concept of attitude and several theoretical models of attitude change have been developed (e.g., the communication matrix model of media effects-CMM; the cognitive response theory-CRM; the elaboration likelihood model of persuasion-ELM; Kitchen et al. 2014; McGuire, 1989; Petty and Cacioppo, 1981; Petty et al. 2009). The aforementioned theoretical models of attitude change are very useful in determining individual differences and the particular psychological processes through which the media will be effective versus ineffective; the media are assumed to be effective to the extent that they change the valence or extremity of a person's attitude in the desired direction (Petty et al. 2009). Yet, individual difference variables are difficult to be manipulated when designing mass media and especially short films.

Method

We used Conjoint Analysis (CA) to identify which elements of a film students perceive to be effective in terms of promotion of entrepreneurship. The aim of CA is to identify the attribute combination, which confers the highest importance (or utility) to the individual and to establish the relative importance of attributes. An ideal product profile can then be assessed (Lohrke et al. 2010). Conjoint analysis is an indirect approach that infers importance by analyzing an outcome measure (dependent variable) (Lohrke et al. 2010).

In the present study, the attributes (i.e., design features) and attribute levels were determined prior to administering the CA questionnaire, based largely on the literature and from suggestions made by a team of six film directors in Greece. In the CA questionnaire we examined two technical features and three non-technical features related to the message content of the short-film.

Specifically, the two technical design features were: (1) “the length of the short film” (with 3 levels: 4, 7, and 10 min), and (2) “characters participating/source of the message” (with three levels: real actors, avatars, both actors and avatars). It makes intuitive sense that the longer the short film is, the harder it is to keep the viewer’s attention. According to our consulting directors the current optimum short film length, both for film festival programmers and television buyers appears to be around 10 min. This is enough to tell a good story and hold the audience’s attention. However, some researchers have used shorter films (Grichnik et al. 2010).

The second technical design feature was the source of the message (i.e., the particular individuals/characters participating in the film) (with three levels: real actors, avatars, both real actors & avatars). This is an important feature. Research has been conducted on images of entrepreneurs presented in television (Boyle, 2008) and printed media (Radu and Redien-Collot, 2008). Furthermore, some governments use role models as key policy mechanisms to influence peoples’ entrepreneurial aspirations (Eikhof et al. 2013). This stream of research proposes that associating a message with an expert or an attractive source, leads to increases in agreement with the message. Nevertheless, research on attitude change has provided mixed results regarding the effects of source variables on attitude change (Wilson and Sherrell, 1993). Previous research suggest that virtual representations (i.e., avatars and agents) are often implemented in social interactions and thus, it is essential to determine how students respond to these representations (Fox and Bailenson, 2009; Fox et al. 2009).

The three non-technical factors related to the message content were: (1) “the frame of the content of the basic message” (with two levels: gains associated with business start-up, loss by not starting a business), (2) “the advantage of entrepreneurship” (with two levels: advantages to the individual, advantages to the society), and (3) “the inclusion of emotions in the film’s content as a motivational element” (two levels: Yes: include anticipated emotions, No: include no emotions). According to message framing theory, how something is presented to the audience (called “the frame”) influences the choice people make about how to process that information (Rothman and Salovey, 1997). For example, gain-framed appeals (i.e., the potential benefits of the action) have been found to be more effective in persuading people compared to loss-framed appeals such as the potential side-effects (Rothman et al. 2006).

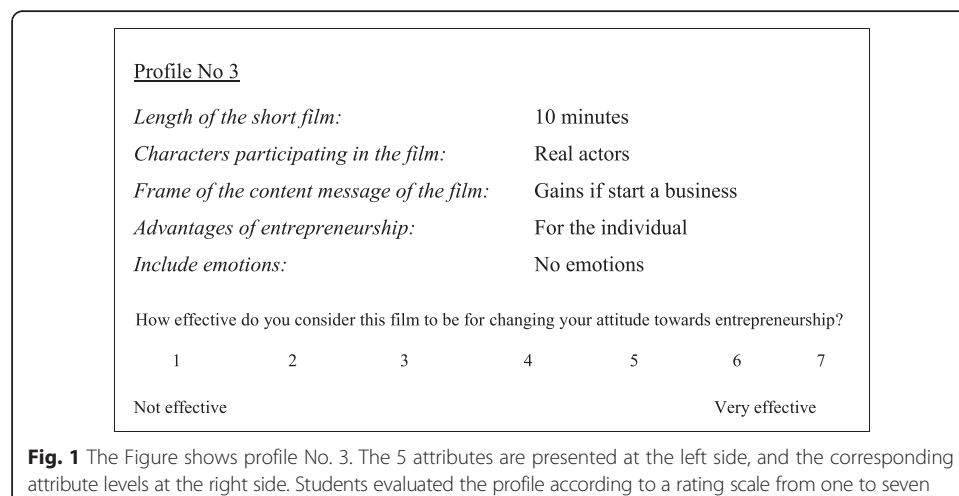
With respect to the second factor, “the advantage of entrepreneurship”, research on cross-cultural psychology suggests that when the content of the message fits cultural-frame, messages feel more persuasive (Uskul & Oyserman, 2010). For example, people from interdependent cultures (Asian countries) put more emphasis on the importance of other people in society; people try to maintain harmony in interpersonal relations and as such the impact of entrepreneurship for the society could be an important persuasive factor. On the contrary, people from individualistic cultures (i.e., West European and North American countries) concentrate on the independence of the individual from others. In this case the importance of entrepreneurship for the individual could be an important factor.

Finally, we examined whether emotions should be included in the content of the message. Research in social psychology suggests that emotionalized media content is more effective in changing affect-based attitudes compared to cognition-based attitudes (see Ryff et al. 2014). Specifically, we examined if the inclusion of anticipated emotions in the film, or not is perceived as important for the effectiveness of the short film. Anticipated emotions are predictions or forecasts about the emotional consequences that will be experienced when outcomes materialize in the future (Baumgartner et al. 2008). Research supports the idea that anticipated emotions can often guide decision-making (Baumeister et al. 2007).

Having established the five factors and their levels, hypothetical conjoint scenarios (or profiles) which described with a verbal description different combinations of the factors, were presented to students for evaluation. The study gave rise to 72 possible combinations ($3 \times 3 \times 2 \times 2 \times 2$). To keep the number of scenarios at a manageable level, we employed an orthogonal fractional factorial design (Hanisch and Rau 2014; Lohrke et al. 2010), which allowed us to reduce the number of original attribute combinations to sixteen. The present study utilized a verbal description approach. Each verbal description was placed on a profile card. A sample profile is presented in Fig. 1.

The outcome variable was the “effectiveness of the film” for the particular person. As previously mentioned, a short-film is assumed to be effective to the extent that it changes the valence or extremity of a person’s attitude towards entrepreneurship in the desired direction (Petty et al. 2009). Specifically, we asked students to assess the effectiveness of the specific profile in terms of how it would change their own attitudes towards entrepreneurship on a 7-point Likert-type scale anchored by the end points by 1-“No – I do not consider this profile effective” to 7-“Yes – I consider this profile very effective”.

Based on dependent variables (i.e., observed ratings of each scenario) and the specified attributes (i.e. independent variables), part worth utility values were estimated. Total utility of each respondent with respect to a scenario, was determined from the combination of individual or part worth utility values for each factor. In order to obtain estimates of the parameters and decompose the decision we used Ordinary Least Square regression analysis (Shepherd and Zacharakis 2003). We used a paper-based booklet to collect responses. The research instrument contained a cover letter, instructions for the decision



task, the conjoint experiment and a post-experiment questionnaire that asked respondents to report demographic data and questions regarding their personal characteristics.

Data for the study were collected from 221 engineering students from a Greek technical university. Surveys were administrated individually to students during break time between classes. Students were given the following explanation for the purposes of the study: “This is an effort to combine research into how mass media and especially short films may be used effectively in order to motivate students to change their attitudes towards business start-up as a career choice. You will answer a questionnaire without filling in anything that will identify you. The results will be used to better understand how entrepreneurship development relates to mass media.”

The study was developed on October 2014 and data collection took place during November and December 2014. The student sample consisted of 111 male students (50.2 %), the mean sample age was 21.90 years ($SD = 1.50$). Thirty three percent of the participants reported that one of their parents owned full time business most of the time, while they were growing up. Fifty nine percent of the participants had previous employed working experience.

Results

In Table 1 we present the part-worth utility scores for each level of the five factors used to describe short films. The interpretation of CA results is quite simple. First, one needs to look at the relative importance of each attribute and, second, to the distribution of utilities by their respective part-worth utilities. “Characters participating” was identified as the most important factor (30.09 %), followed by “the length of the short-film” (26.96 %), “the inclusion of emotions” (15.95 %), “the advantages of entrepreneurship” (14.35 %) and finally “the frame of the content” (12.65 %). All four factors examined were perceived as important from students as indicated by the small differences among the importance scores.

Within the factors, part worth utilities of each level were also investigated. For example, within “characters participating”, maximum utility was obtained from “real

Table 1 Conjoint analysis results of ($N = 221$). “Characters participating” was identified by students, as the most important factor (30.09 %)

Attribute	Levels	Utility	Relative Importance (%)
Length of the short film	4 min	0.017	26.96
	7 min	0.101	
	10 min	−0.118	
Characters participating	Real actors	0.230	30.09
	Avatars	−0.208	
	Real actors & avatars	−0.022	
Frame of the content message	Gains if start a business	0.065	12.65
	Losses if not start a business	−0.065	
Advantage of entrepreneurship	For the individual	0.011	14.35
	For the society	−0.011	
Include emotions	Include anticipated emotions	−0.003	15.95
	No emotions	0.003	
Constant: 4.540			

Pearson's $R = 0.954$; Kendall's $\tau = 0.979$. These statistics show that the data fit was very good

actors" (Utility = 0.230), whereas the utility of avatars was lower (Utility = -0.208). Just because "avatars" received a negative utility value, it does not mean that this level was unattractive to students. In fact "avatars" may have been acceptable to all respondents, but "real actors" were better perceived. The utilities are scaled to sum to zero within each factor. Finally, results indicate an adequate level of internal validity in terms of Pearson's product moment correlation coefficient and Kendall's tau is between observed and estimated preferences (see Table 1).

Discussion

This paper addresses an important and increasingly attractive research question with some real-world applications: i.e., how can educators and policy makers use interventions to facilitate entrepreneurial attitudes. The results of the present research offer some initial insights that can help guide interventions and future research on this topic.

Conjoint analysis results presented in Table 1 demonstrate that students perceive a short film to be effective for the promotion of entrepreneurship when:

(1). Emphasis is placed on the characters that participate in the film (i.e., message source). Analyses results revealed that this is the most important factor (relative importance of the factor is 30.09 %). From the possible alternatives, "real actors" should be used (this factor level had the highest utility, $U = 0.230$). Real actors may help to break through to youth and engage them with messages relevant to entrepreneurial behavior; (2). The length of the film should be around seven minutes; (3). The content of the film should not include emotions, should stress the advantage of entrepreneurship for the individual and the gains if one starts a business. The aforementioned two technical factors were perceived as being the most influential in determining a short film as effective for the promotion of entrepreneurship as a career choice (relative importance 57.05 %).

The results of this article represent an initial exploration of short films' design features for the effective promotion of entrepreneurship. Although we have tried to understand *students' perceptions* with respect to film characteristics, further work is needed in this area. For example, in the conjoint experiment we attempted to approximate the "real world". However, this attempt is imperfect because it is difficult to encompass all factors likely to be involved in decision making.

There are several other considerations that can come to mind when one starts thinking about using films for the promotion of entrepreneurship. To this we would like to add the observation that the factors investigated herein, may be, arguably, a paper-based exercise since it is difficult to judge the effect of film length or characters without considering how this is actually carried out. A long film may seem not effective, but if done very well and in an engaging way, a viewer may be so engulfed as to forget about the length. Similarly, avatars/agents may not be seen as effective in general, but a well-chosen avatar can be quite effective. The broader point here is that this line of research might be most effective if it worked with actual videos rather than generic descriptions of them.

We have investigated only five of the executional characteristics that might be possible to examine, and we were limited by the Greek students chosen for use in the rating session. In order to improve derived results we encourage scholars in this area to test the proposed framework with students across different cultures. Furthermore, it is possible

that the novelty of the protocol itself could have influenced the students to respond differently than if they were to view the short film on television or the internet, a fact that we could not investigate into.

Conclusion

We present a methodology that couples short-film design oriented towards the effective change of students' attitudes towards entrepreneurship with conjoint analysis. The premise underlying the present research is that in order to move forward our understanding of the effects of mass media on entrepreneurial aspirations, a thorough examination of the executional factors is necessary.

Our results represent a small step toward a better understanding of the design of effective audiovisual means for the promotion of entrepreneurship. More empirical work is needed. Future studies, for example, could test empirically which executional factors of films may overcome various types of resistance (for example, fear of entrepreneurial failure). Moreover, although our results suggest that involvement with real actors is an important determinant of the persuasive effects of short-films, future research could explore how these effects can be maximized. Of particular interest is a greater understanding of what features of actors may facilitate entrepreneurial involvement.

Our results may be particularly useful in the design of entertainment education programs for the promotion of entrepreneurship. Entertainment education as an intervention strategy refers to the design and implementation of media messages to both entertain and educate, in order to increase audience members' knowledge, create favorable attitudes, and change overt behavior (Asbeek Brusse, et al. 2015; Singhal and Rogers, 2002; Singhal et al. 2013). Entertainment education for entrepreneurship may represent an alternative to classroom training and can inspire students to become more interested in entrepreneurship and can initiate more business startups.

In summary, mass media are important influential factors in a wide range of attitudes and behaviors. Existing empirical research however, has failed to provide support for the proposition that mass media are effective in changing individuals' attitudes towards entrepreneurship. The results presented herein, can guide further explorations and investigations.

Authors' contributions

Authors contributed equally to this manuscript. All authors read and approved the final manuscript.

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